

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kym B. Arcuri, et al.  
Filed: March 15, 2001  
Title: Structured Fischer-Tropsch Catalyst System and Method

Parent Application:

Serial No.: 09/455,047  
Filed: December 6, 1999  
Group Art Unit: 1621  
Examiner: Parsa, J.  
Title: Structured Fischer-Tropsch Catalyst System and Method

HONORABLE ASSISTANT COMMISSIONER  
OF PATENTS  
WASHINGTON, D.C. 20231

Dear Sir:

I hereby certify that this  
correspondence is being deposited with  
the United States Postal Service as  
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of Patents, Washington, D.C. 20231,  
on the date shown below.

  
Tim Daniel

3/15/01

Date

PRELIMINARY AMENDMENT

Prior to the initial review of the divisional application filed with this Amendment by Kym B. Arcuri et al. entitled "*Structured Fischer-Tropsch Catalyst System and Method*" filed December 6, 1999, please amend the application as follows:

Please refer to the attached sheet showing a marked up version of the amendments to the specification and the claims.

**IN THE SPECIFICATION:**

Page 1, please replace the paragraph beginning on Line 1 with:

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a divisional from U.S. Patent Application Serial No. 09/455,047, filed by Kym B. Arcuri, et al. on December 6, 1999 and entitled "*Structured Fischer-Tropsch*

*Catalyst System and Method*" now U.S. Patent No. \_\_\_\_\_ which claims the benefit of U.S. Provisional Application Serial No. 60/111,312 filed December 7, 1998 and U.S. Provisional Application Serial No. 60/148,805 filed August 12, 1999.

**IN THE CLAIMS:**

For the convenience of the Examiner, all pending claims of the application whether they have been amended or not are reproduced below.

**Please cancel claims 1-15 and 22-25 without prejudice or disclaimer.**

16. A system for converting CO and H<sub>2</sub> into Fischer-Tropsch products through the Fischer-Tropsch reaction, the system comprising:

an inlet;

a reactor fluidly coupled to the inlet for receiving CO and H<sub>2</sub>;

a stationary, structured Fischer-Tropsch catalyst disposed within the reactor for converting at least a portion of the CO and H<sub>2</sub> into Fischer-Tropsch products through Fischer-Tropsch reaction; and

wherein the structured catalyst has a voidage ratio greater than or equal to 0.6.

17. The system of Claim 16 wherein the structured Fischer-Tropsch catalyst disposed within the reactor has at least a catalyst concentration of 30 percent.

18. The system of Claim 16 wherein the structured Fischer-Tropsch catalyst has a linear dimension of at least 500 microns.

19. A system for converting shorter-chain hydrocarbons into longer-chain hydrocarbons, the system comprising:

a feed stream preparation subsystem for receiving an oxygen-containing gas, light hydrocarbons, water, and tail gas, and preparing the feed streams for conversion to synthesis gas;

a synthesis-gas subsystem for receiving feed streams of oxygen-containing gas, light hydrocarbons, and steam and preparing therefrom synthesis gas;

a synthesis subsystem for receiving synthesis gas from the synthesis-gas subsystem and for converting at least a substantial portion of the synthesis gas into longer-chain hydrocarbons through the Fischer-Tropsch reaction; and

wherein the synthesis subsystem comprises:

a saturator unit having an inlet for receiving a circulating hydrocarbon liquid and an inlet for receiving synthesis gas, the saturator for substantially saturating a hydrocarbon liquid with synthesis gas introduced into the saturator;

a reactor fluidly coupled to the saturator unit for receiving a saturated hydrocarbon liquid therefrom; and

a stationary, structured Fischer-Tropsch catalyst disposed within the reactor for converting at least a portion of a saturated hydrocarbon liquid into longer-chain hydrocarbons.

20. A system for converting synthesis gas into longer-chain hydrocarbon products through the Fisher-Tropsch reaction, the system comprising:

a saturator unit having an inlet for receiving a circulating hydrocarbon liquid and an inlet for receiving synthesis gas, the saturator for substantially saturating a hydrocarbon liquid with synthesis gas introduced into the saturator;

a reactor fluidly coupled to the saturator unit for receiving a saturated hydrocarbon liquid therefrom; and

a stationary, structured Fischer Tropsch catalyst disposed within the reactor for converting at least a portion of a saturated hydrocarbon liquid into longer-chain hydrocarbons through a Fischer-Tropsch reaction.

21. The system of Claim 20 further comprising a heat exchanger associated with the reactor for removing heat from the reactor.

#### REMARKS

Applicants request the Examiner to enter the above amendments prior to examination of this application. Applicants respectfully submit that amendments are supported by the

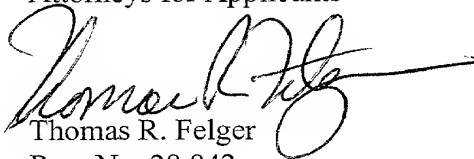
specification and add no new matter. Early and favorable acceptance of this divisional application is respectfully requested.

The Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.

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Date: 15 MAR 2001

FILED "T330360"

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

On Page 1, Line 1, please delete the paragraph:

[RELATED APPLICATIONS]

This application claims the benefit of U.S. Provisional Application Serial No. 60/111,312 filed December 7, 1998 and U.S. Provisional Application Serial No. 60/148,805 filed August 12, 1999.]

and insert:

--CROSS REFERENCE TO RELATED APPLICATIONS

This application is a divisional from U.S. Patent Application Serial No. 09/455,047, filed by Kym B. Arcuri, et al. on December 6, 1999 and entitled "*Structured Fischer-Tropsch Catalyst System and Method*" now U.S. Patent No. \_\_\_\_\_ which claims the benefit of U.S. Provisional Application Serial No. 60/111,312 filed December 7, 1998 and U.S. Provisional Application Serial No. 60/148,805 filed August 12, 1999.—

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